

LEGIBILITY NOTICE

A major purpose of the Technical Information Center is to provide the broadest dissemination possible of information contained in DOE's Research and Development Reports to business, industry, the academic community, and federal, state and local governments.

Although a small portion of this report is not reproducible, it is being made available to expedite the availability of information on the research discussed herein.

Los Alamos National Laboratory is operated by the University of California for the United States Department of Energy under contract W-7405-ENG-36.

TITLE: Training and Exercises of the Emergency Response Team

AUTHOR(S): Deidra D. Yearwood, MST-8

SUBMITTED TO: American Nuclear Society, Charleston, SC
September 1988

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

By acceptance of this article, the publisher recognizes that the U.S. Government retains a nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes.

The Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy.

MASTER

 **Los Alamos** Los Alamos National Laboratory
Los Alamos, New Mexico 87545

**TRAINING AND EXERCISES OF THE
EMERGENCY RESPONSE TEAM
AT THE LOS ALAMOS PLUTONIUM FACILITY**

**Prepared by
Deidra D. Yearwood
Los Alamos National Laboratory
Group MST-8 MS E-583
Los Alamos, NM 87545**

INTRODUCTION

The Los Alamos National Laboratory Plutonium Facility has an active Emergency Response Team. The Emergency Response Team is composed of members of the operating and support groups within the Plutonium Facility. In addition to their initial indoctrination, the members are trained and certified in first-aid, CPR, fire and rescue, and the use of self-contained-breathing-apparatus. Training exercises, drills, are conducted once a month. The drills consist of scenarios which require the Emergency Response Team to apply CPR and/or first aid. The drills are performed in the Plutonium Facility, they are video taped, then reviewed and critiqued by site personnel. Through training and effective drills the Emergency Response Team can efficiently respond to any credible accident which may occur at the Plutonium Facility.

BACKGROUND

The Los Alamos National Laboratory Plutonium Facility has been in operation since 1978. In the ten years since the facility opened, expansion has played a major role in the growth and activity of the Emergency Response Team (ERT). Not only has the facility more than tripled in personnel and work locations, but the variety of tasks being performed are phenomenal. The tasks are in support of the Department of Energy. They include plutonium aqueous recovery, metal production, the heat source program, laser isotope separation research, reactor fuels program, oxide production, and a number of research, development, and demonstration activities. Each task carries both common and unique possibilities of accidents. Knowing the possibilities, ranging from the simple to the more complex, scenarios are developed for training and exercising the proper responses to the emergencies.

There are currently 45 members on the Emergency Response Team, composed of operating and support personnel. There are four Emergency Response Team Leaders and an Emergency Response Team Coordinator. The duties of the Emergency Response Team Coordinator are to ensure that the entire Emergency Response Team is trained and certified on skills, techniques, equipment, and procedures to effectively respond to any potential emergency situation on site. The Emergency Response Team Leaders direct his/her team in the immediate response to an emergency or re-entry in to the emergency area.

EMERGENCY RESPONSE TEAM TRAINING AND EXERCISE

TRAINING

Emergencies are serious situations, which endanger or adversely affect people, property, or the environment, occur rapidly and unexpectedly and require immediate action. All employees who work with fissile material in the Plutonium Facility must successfully complete the following appropriate safety-related training.

TABLE I

<u>TOPIC</u>	<u>SPONSOR</u>
Health Physics Indoctrination *	Health Physics Group
Radiation Safety #	Training Office
Criticality Safety #	Training Office
Fire Prevention and Control #	Training Office
Emergency Response At TA-55	Training Office
Process Safety (On The Job)	Supervisory Staff
New Hire Orientation	Training Office
Glovebox Operation and Maintenance	Training Office

* mandatory yearly retraining/recertification

repeated on a bi-yearly basis

The Plutonium Facility (TA-55) Emergency Response Team receives the training listed in TABLE I in addition to the following training.

TABLE II

<u>TOPIC</u>	<u>FREQUENCY OF TRAINING</u>
Red Cross First Aid	Every 3 years
Red Cross CPR	Every year
Fire Fighting	Every year
First Responder	40 hour course/annual update

Tables I and II list the minimum training required for ERT members. Additional classes will continue to be included into the training program for ERT members to enhance specific skills and knowledge.

EXERCISES

Exercises (drills) for the Emergency Response Team are conducted once a month. Table III summarizes the drills scheduled for FY-1988. In most cases the scenarios actually involve organizations in addition to the ERT. The Los Alamos Medical Center, the Fire Department, and

ATTACHMENT A

TRAINING SUBJECTS 1988

- * Site familiarization and site specific hazards
 - Executive committee / Team leaders
 - Each Team leader will train own team

- * Risk analysis and Hazards ranking

- * Organization within the teams

- * Certification
 - SCBA
 - First Responder
 - Recertification of First Responder

- * Testing Program (biannual)
 - Written
 - Practical (hands-on)

- * Communication
 - 9-911
 - Control Room
 - HSE-2
 - Administration Notification
 - EPO

the on-call physician are some of the other organizations involved with the training exercises.

TABLE III

1988 SCENARIOS

1. Ion Exchange Treatment Tank Explosion
2. Caustic Line Break and Spray
3. Hydrofluoric Acid Spill and Splash
4. Explosion In Glovebox with Lacerations and Possible Broken Bones
Involve ERT, HSE-10, HSE-2, Fire Department, Mason-Hanger, LAMC
5. Fluorine Gas Leak
6. Organic Solvent Intoxication
7. Nitric Acid Spray - eyes, skin involve those as in #4
8. Oxalic Acid Dust Cloud
9. Fall From Top Of Glovebox
10. Worker Passes Out In Plant
11. Construction Worker Pinned Under Building Materials
12. Recovery After Criticality Excursion

The training exercises are extremely valuable since the scenarios are based upon real potential accidents.

SUMMARY

The Emergency Response Team for the Plutonium Facility at Los Alamos is extremely active in training and performing valuable exercises. The training program as well as the scenario development continued to be expanded and improved upon. Involving the Health Physics Group, the Medical Center, the Fire Department, and the security guards has heightened emergency response awareness for everyone.

Attachment A summarizes the additional training subjects for 1988.

ATTACHMENT A

TRAINING SUBJECTS
1988

- * Site familiarization and site specific hazards
 - Executive committee / Team leaders
 - Each Team leader will train own team

- * Risk analysis and Hazards ranking

- * Organization within the teams

- * Certification
 - SCBA
 - First Responder
 - Recertification of First Responder

- * Testing Program (biannual)
 - Written
 - Practical (hands-on)

- * Communication
 - 9-911
 - Control Room
 - HSE-2
 - Administration Notification
 - EPO